

10/500873

DTTB Rec'd PCT/FYB 07 JUL 2004

Please amend the paragraph beginning at line 19 on page 4 as follows:

In the gauge case 1 shown in Fig. 2, portions of individual metallic lead members 3a to 3h, indicated by dotted lines, are buried in the epoxy or PPS resin. Also, as shown in Fig. 1, when the connector portion 7 is molded with the PBT or PPS resin 2, the metallic terminals 5 are buried in the PBT or PPS resin together with the gauge case 1 shown in Fig. 3. Thus, the pressure sensor has a structure that the metallic lead members 3a to 3h and the metallic terminals 5 are each buried in the resin. In this state, due to physical properties, the resin 2 has the coefficient of linear expansion different from those of the metallic lead members 3a to 3h and the metallic terminals 5, and the resin 2 itself causes shrinkage of about 1% when returned to room temperature after being molten in the molding step. Hence, the small gaps 20, 21 necessarily generate between the metal and the resin. The generation of those gaps raises the following problems. For example, if open air is repeatedly sucked and discharged through the gaps in response to fluctuations of engine pressure, the protective material 9 is moved over relatively large strokes, causing the bonding wires 8 to move correspondingly and undergo fatigue breakage, which leads to a failure. Even in the case not causing the fatigue breakage, characteristics of the pressure sensor become unstable. In the present invention, a polymethacrylic or other anaerobic adhesive or an acrylic or other high-permeability adhesive is filled in

the gaps between the resin 2 and the metallic lead members 3a to 3h and the metallic terminals 5 by a spontaneous or vacuum permeation method. As a result, complete hermetic sealing can be ensured.

Please amend the paragraph beginning at line 24 on page 6 as follows:

Fig. 4 is a vertical sectional view of a pressure transformer with an intake temperature measuring sensor. Small gaps 20 generate between a resin and a metallic lead (1) 15 and a metallic lead (2) 19, both the metallic leads supporting an intake temperature sensor 16. As in the present invention described above, therefore, by filling, e.g., the anaerobic adhesive in the small gaps for hermetic sealing, a leakage of intake air can be prevented, whereby a pressure transformer and an intake temperature sensor with high reliability and high accuracy can be obtained.

Please amend the paragraph beginning at line 18 on page 7 as follows:

After molding the gauge case 1, shown in Fig. 3, with the metallic lead members 3 inserted therein, the molded gauge case 1 is immersed in a high-permeability adhesive, such as an anaerobic adhesive. After the immersion, the gauge case 1 is placed in a vacuum state to purge out air bubbles 30 remaining in the small gaps 20 between the gauge case 1 and the metallic ~~terminals 5~~ lead members 3. After being placed in the vacuum state, the gauge case 1 is taken out from the anaerobic adhesive and is left

to stand in the atmosphere. At this time, a plurality of gauge cases are left to stand in the atmosphere in a such state that they are not in close contact with each other. If the gauge cases are left to stand in close contact with each other, there may occur a problem that terminals of the adjacent gauge cases are bonded to each other. For that reason, the gauge cases must be avoided from being left to stand in the atmosphere in the closely contact state. After being left to stand in the atmosphere, the adhesive is removed by using an organic solvent for cleaning of the gauge case in the state where the small gaps are completely hermetically sealed (i.e., in the state where the adhesive has been hardened).